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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/829,251

04/22/2004

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06/23/2009

EXAMINER

DURHAM, NATHAN E

ART UNIT

PAPER NUMBER

3765

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/829,251

**Applicant(s)**

LEE, JEONG SIK

**Examiner**

NATHAN E. DURHAM

**Art Unit**

3765

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 April 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-8 and 10-12 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1,2,4-8 and 10-12 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 22 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/S508)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment and Arguments***

Applicant's amendment and arguments, filed 27 April 2006, have been reviewed and considered. Claims 1, 6, 7 and 12 have been amended and therefore, claims 1, 2, 4-8 and 10-12 are currently pending.

The applicant's amendment is not considered sufficient in overcoming the prior art rejections as presented in the previous Office Action for the reasons addressed below. In response to the applicant's amendment stating that the sweatband "is processed by a high temperature treating and piece dyeing method", the examiner notes that this statement is considered purely functional language containing no further limiting structure and therefore will not be given patentable weight. The applicant's claims are directed at an apparatus and are concerned only with the final structure of the sweatband, not method steps directed at the process of making (product-by-process claim). The prior art must only disclose the final apparatus, in which case the prior art references accomplish this task. In response to the applicant's amendment stating that the sweatband has "no need for stitching", the examiner notes that this statement is also considered purely functional language containing no further limiting structure and therefore not given patentable weight. The recitation "with no need for stitching" is not a definitive statement because the applicant is failing to definitively claim that there is "no stitching". By saying there is no need for stitching; stitching could still be present because any stitched item has no need for stitching if attachment can be accomplished

by another method such as gluing. Regardless, the previous prior art rejections have addressed the sweatband being "seamless".

The applicant's arguments have been considered, but are not persuasive for the reasons addressed below. Regarding the applicant's argument in reference to the sweatband being woven with the monofilament yarn warp-way and two-ply multifilament yarn weft-way, the previous examiner has already provided a rejection with appropriate reasoning in the previous Office Action. The applicant has not provided a proper argument (reasoning) with respect to the previous examiner's rejection (did not address particular official notice / design choice rejections). In response to the applicant's argument regarding the positioning of the sweatband of CHO, note that the sweatband (S) of CHO is clearly attached at a lower peripheral of the crown as shown in figure 2. Accordingly, the rejections as presented in the previous Office Action still stand and this Office Action is considered a Final Rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dean (4,107,371) in view of Kitamura (5,387,300).

In regard to claim 1, Dean discloses a sweatband using monofilament yarn for a cap, the sweatband is woven with monofilament and multifilament yarn in the weft and warp directions respectively. The yarns comprise of nylon and polyester and do not contain polyurethane (col. 2, lines 5-7, 17-18, and 35-40). The most important characteristic of the instant invention is that it is stiff enough in one direction to reinforce the soft structure of the hat while being flexible enough in the other direction to adapt to the shape of the hat. Dean discloses that multifilament yarns provide flexibility while monofilament yarns provide rigidity (col. 2, lines 5-8 and col. 3, lines 5-9) and that fabric that is relatively stiff in one direction is widely used in the production of apparel (col. 1, lines 11-13). The nature of a woven fabric allows for the weft and warp directions to be interchangeable. Because of this, it is not important that the monofilament yarn is in the warp direction and the multifilament yarn is in the weft direction. It is only important that the vertical direction comprises a monofilament yarn for support and the horizontal direction comprises a multifilament yarn for flexibility. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the monofilament yarn in the warp direction and the multifilament yarn in the weft direction as taught by Dean because the warp and weft directions are interchangeable as long as the monofilament yarn is used in the vertical direction and multifilament yarn is used in the horizontal direction.

Although Dean does not specifically require that the multifilament yarn be 2-ply or 1-ply, the specification does not give any reason as to why the instant invention requires 2-ply or 1-ply multifilament yarn. The use of 2-ply and 1-ply multifilament yarns affect

the thickness of the material and are widely used in the art. 2-ply yarns that are twisted at regular intervals are also widely used in the art. The nature of 2-ply yarn twisted at regular intervals requires that the yarn have a coil shape. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize 1-ply and 2-ply multifilament yarn twisted at regular intervals having a coil shape in order to manufacture the band at the appropriate thickness because 1-ply and 2-ply multifilament yarn twisted at regular intervals having a coil shape are widely used in the art.

Dean discloses an open weave fabric. However, Kitamura teaches that seamless tubular fabrics are widely used for belts, bands, and other objects (col. 1, lines 15-24). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a seamless tubular fabric in the construction of Dean's band as taught by Kitamura because seamless tubular fabrics are widely used in the construction of bands.

Claim 6 is rejected under 35 U.S.C. 103(a) as being obvious over Dean (4,107,371) in view of Kitamura (5,387,300) in further view of Pickering et al. (4,981,161). Pickering et al. discloses monofilament yarn and multifilament yarn in one direction and multifilament yarn in the other direction (col. 3, lines 1-27). Monofilament and multifilament yarns used in the same direction help increase durability over many cycles of use (col. 2, lines 5-11). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize monofilament and multifilament

yarn in the same direction as taught by Pickering et al. in order to increase the durability of the band over many cycles of use.

Claims 7-8 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho (6,115,844) in view of Dean (4,107,371) in further view of Kitamura (5,387,300).

In regard to claims 7-8, Cho discloses headwear comprising: a crown main body (fig. 2); a visor portion; and a sweatband (A) attached along the lower peripheral edge of the crown main body. The most important characteristic of the instant invention is that it is stiff enough in one direction to reinforce the soft structure of the hat while being flexible enough in the other direction to adapt to the shape of the hat. Dean discloses that multifilament yarns provide flexibility while monofilament yarns provide rigidity (col. 2, lines 5-8 and col. 3, lines 5-9) and that fabric that is relatively stiff in one direction is widely used in the production of apparel (col. 1, lines 11-13). The nature of a woven fabric allows for the weft and warp directions to be interchangeable. Because of this, it is not important that the monofilament yarn is in the warp direction and the multifilament yarn is in the weft direction. It is only important that the vertical direction comprises a monofilament yarn for support and the horizontal direction comprises a multifilament yarn for flexibility. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the monofilament yarn in the warp direction and the multifilament yarn in the weft direction as taught by Dean because the warp and weft directions are interchangeable as long as the monofilament yarn is used in the vertical direction and multifilament yarn is used in the horizontal direction.

Although Dean does not specifically require that the multifilament yarn be 2-ply or 1-ply, the specification does not give any reason as to why the instant invention requires 2-ply or 1-ply multifilament yarn. The use of 2-ply and 1-ply multifilament yarns affect the thickness of the material and are widely used in the art. 2-ply yarns that are twisted at regular intervals are also widely used in the art. The nature of 2-ply yarn twisted at regular intervals requires that the yarn have a coil shape. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize 1-ply and 2-ply multifilament yarn twisted at regular intervals having a coil shape in order to manufacture the band at the appropriate thickness because 1-ply and 2-ply multifilament yarn twisted at regular intervals having a coil shape are widely used in the art.

Dean discloses an open weave fabric. However, Kitamura teaches that seamless tubular fabrics are widely used for belts, bands, and other objects (col. 1, lines 15-24). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a seamless tubular fabric in the construction of Dean's band as taught by Kitamura because seamless tubular fabrics are widely used in the construction of bands.

In regard to claims 10 and 11, Dean discloses that the band is made of nylon and polyester (col. 2, lines 5-7, 17-18, and 35-40). Nylon and polyester are inexpensive, durable materials that are commonly used in the manufacturing of apparel. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize nylon and polyester in the manufacturing of the band because nylon and



polyester are inexpensive, durable materials commonly used in the manufacture of apparel.

Claim 12 is rejected under 35 U.S.C. 103(a) as being obvious over Cho (6,115,844) in view of Dean (4,107,371) in further view of Kitamura (5,387,300) in further view of Pickering et al. (4,981,161). Pickering et al. discloses monofilament yarn and multifilament yarn in one direction and multifilament yarn in the other direction (col. 3, lines 1-27). Monofilament and multifilament yarns used in the same direction help increase durability over many cycles of use (col. 2, lines 5-11). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize monofilament and multifilament yarn in the same direction as taught by Pickering et al. in order to increase the durability of the band over many cycles of use.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHAN E. DURHAM whose telephone number is (571)272-8642. The examiner can normally be reached on Monday - Friday, 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary L. Welch can be reached on (571) 272-4996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NED

/GARY L. WELCH/  
Supervisory Patent Examiner, Art Unit 3765